

**TESTIMONY OF TOM MELIUS, ACTING DEPUTY DIRECTOR FOR POLICY,
U.S. FISH AND WILDLIFE SERVICE, U.S. DEPARTMENT OF THE INTERIOR, BEFORE
THE HOUSE COMMITTEE ON NATURAL RESOURCES, SUBCOMMITTEE ON
FISHERIES, WILDLIFE, OCEANS AND INSULAR AFFAIRS, ON H.R. 6007, THE NORTH
TEXAS ZEBRA MUSSEL BARRIER ACT OF 2012**

July 19, 2012

Chairman Fleming, Ranking Member Sablan, and Members of the Subcommittee, I am Tom Melius, Acting Deputy Director for Policy for the U.S. Fish and Wildlife Service (Service). Thank you for the opportunity to appear before the Subcommittee to testify on H.R. 6007, the North Texas Zebra Mussel Barrier Act of 2012. This proposed legislation would amend federal law to allow the transfer of water – known to be infested with zebra mussels (*Dreissena polymorpha*) -- from Oklahoma to Texas. The Department of the Interior (Department) opposes this legislation.

Zebra Mussels: Injurious Wildlife

Zebra mussels are the archetypal aquatic invasive species. They are listed as “injurious” under the Lacey Act, 18 USC 42, a criminal statute that prohibits the importation and interstate transport of species listed under the statutory provisions as “injurious wildlife”. Since its introduction to the Great Lakes in the late 1980’s, the species has shown a capacity to reproduce prolifically and to spread through a wide range of mechanisms, causing damage to power generation, water supply management, boating infrastructure, and fish and wildlife resources in affected waters. The population density of zebra mussels in affected waters, particularly as the larvae, or *veligers*, settle in thick clusters in the pipes, drains, boat propeller and ballast tanks of commercially and publically valuable infrastructure, has resulted in unprecedented costs to taxpayers, utility ratepayers, and the boating industry. Water treatment plants are most impacted because the water intakes bring the microscopic free-swimming larvae directly into the facilities, and they cling on to pipes under the water and clog them.

Although precise figures representing the cost of controlling zebra mussels and their impacts have not been generated in recent years, zebra mussel-related costs in the Great Lakes alone are widely estimated to be in the hundreds of millions of dollars per year. Today, despite costly measures to contain them, zebra mussels have spread from Minnesota to Texas and from Vermont to Nebraska. Populations also have been recorded in locations in Colorado, California, and Utah.

Zebra mussels are also known to concentrate certain contaminants, such as PCBs and mercury. Their efficiency in removing organic material from the water column as they feed has negatively impacted native and game fish species populations, which also depend on suspended organic material for food. Veligers can settle on top of native mussel species, and the density of zebra mussels growing on the lower tier of native mussels has resulted in the loss of these native species from some affected waterbodies in North America.

Once zebra mussels become established in a water body, they are very difficult to eradicate with current technology. In large and complex water bodies and hydrologic systems, it can be impossible to eradicate them. Chemicals, particularly chlorine-based chemicals, are among the tools used to control their impacts on infrastructure. Notably, chemicals that can kill zebra mussels may also kill native species and may cause drinking water supplies to fail to meet federal safety standards. Other control mechanisms include filters and mechanical scraping to remove mussels from intake pipes and facilities. Costs for control of zebra mussel varies by location, but a variety of sources estimate costs in the Great Lakes alone to be hundreds of millions of dollars a year.

Biology of Zebra Mussels and History of U.S. Invasion

The zebra mussel is a freshwater species. It was first recorded in Lake St. Clair, north of Detroit, Michigan, in 1988. The species is native to the streams of southern Russia, and it is still found in the Black and Caspian Seas, from which it is believed to have been transferred, accidentally, in the ballast of ships traveling to the Great Lakes ports.

Zebra mussels, and the closely related and ecologically similar quagga mussels (*Dreissena bugensis*), are filter-feeding organisms, and they efficiently remove organic particles from the water column. Zebra mussel veligers attach to most substrates including sand, silt, and harder substrates, where they grow into adults. Zebra mussels are prolific: An adult female zebra mussel may produce between 30,000 and one million eggs per year. Spawning usually begins in late spring to early summer, when the free-swimming veligers begin traveling downstream or dispersing through a lake. The veligers are microscopic in size, and thus invisible to the naked human eye. About two to five percent of zebra veligers reach adulthood, and their life span on average is 5 years. Predators on these mussels include waterfowl, crayfish, and some species of fish. The reproduction rate of zebra mussels overcomes these mortality factors, and in many water bodies that are infested with them, densities are high.

In 1990, in response to the growing alarm about the impact of non-native, aquatic nuisance species on economic, human health, and environmental policy priorities and the growing cost to control or eradicate established populations of species like zebra mussels, Congress passed the Nonindigenous Aquatic Nuisance Prevention and Control Act (NANPCA)(P.L. 101-646), which was reauthorized and amended by the National Invasive Species Act of 1996 (NISA)(P.L. 104-332). The Act assigns the Service, the U.S. Coast Guard, the Environmental Protection Agency, the U.S. Army Corps of Engineers (USACE), and the National Oceanic and Atmospheric Administration (NOAA) certain responsibilities to prevent, monitor, control and study aquatic invasive species. The purposes of the Act include “understanding and minimizing the economic and ecological impacts of nonindigenous aquatic nuisance species that are established, including the zebra mussel and to establish a program of research and technology development and assistance to states in the management and removal of zebra mussels”.

The Act created the Aquatic Nuisance Species Task Force, which is co-chaired by the Service and NOAA, and is directed to establish and implement a program to prevent introductions and dispersal of aquatic nuisance species; to monitor, control, and study such species; and to disseminate related information. The Task Force was assigned in the Act to develop a Zebra Mussel Demonstration

Program, which was amended in NISA to become a Ballast Water Demonstration Program, administered by the Service, NOAA and the U.S. Maritime Administration. The Program's objective was to demonstrate effective ballast water treatment technologies for use on commercial ships in American waters. Funding was provided to support projects such as onboard treatment to control aquatic invasive species. Subsequent efforts to regulate ballast water in U.S. ports at the national and regional scale, including the priority attention of international, national, and regional governing bodies over many years was, to a large extent, fueled by concern over the spread of zebra mussels.

The Act also authorized the Task Force to approve State Aquatic Nuisance Species Management Plans and provide funds, as appropriated, for implementation of these plans. The Task Force includes representatives from 13 Federal and 13 non-Federal entities and is supported by the following six regional panels: the Western, Great Lakes, Mid-Atlantic, Gulf and South Atlantic, Mississippi River Basin, and Northeast Panels. In response to the spread of zebra mussels and to address other invasive, nonnative species, states have passed their own statutes prohibiting importation or possession of species identified by the state legislative body or relevant state agencies as harmful to human health, economic, or environmental priorities.

In 2001, *The 100th Meridian Initiative: A Strategic Approach to Prevent the Westward Spread of Zebra Mussels and Other Aquatic Nuisance Species* was developed to help prevent the western spread of zebra and quagga mussels and to monitor and control new populations when they were detected. The 100th Meridian Initiative was the first comprehensive and strategically focused effort involving Federal, State, Tribal and Provincial entities and other interested parties to address pathways to prevent the westward spread of these mussels and other ANS. It was designed to provide cooperative mechanisms to prevent the spread of zebra and quagga mussels west of the 100th Meridian through the movement of recreational boats from one freshwater lake body to another. The Service's Stop Aquatic Hitchhiker campaign is a cooperative effort that raises public awareness about the potential for zebra mussels and other aquatic invasive species to move and become established in new water bodies on recreational boats and other aquatic recreation equipment. In 2010, the Aquatic Nuisance Species Task Force-approved *Quagga-Zebra Mussel Action Plan for Western U.S. Waters* was developed and is the Department of the Interior's roadmap for addressing the western spread of these invasive mussels.

History of Issue

Lake Texoma, on the border of Oklahoma and Texas, is known to contain zebra mussels. A recent resolution of the state border means that the water that will be taken in from Lake Texoma will come from Oklahoma. The movement of water from Lake Texoma, as proposed by the North Texas Municipal Water District (NTMWD), into the currently uninfested Lake Lavon is predicted to transfer zebra mussels or their veligers into Lake Lavon. This would likely result in the spread of zebra mussels to all rivers, pipes, and lakes hydrologically connected to Lake Lavon.

As noted above, the zebra mussel is listed as "injurious" wildlife under 18 U.S.C. 42, otherwise known as the Lacey Act, Title 18. The state of Texas statutorily prohibits the importation of "harmful or potentially harmful exotic species", including the zebra mussel (Title 31 of Texas Administrative Code, Chapter 57.115). Title 16 U.S.C. 3371 et seq. prohibits the transport of

species across state lines if the relevant states involved have laws protecting or prohibiting the species in question. Therefore, the transport of zebra mussels across the state border from Oklahoma into Texas violates both Title 18 and Title 16 Lacey Act provisions prohibiting the transfer of certain species across state lines.

In late 2010, the Service's Office of Law Enforcement was notified by the NTMWD that it intended to transfer water from Lake Texoma to flow into Lake Lavon to meet an urgent need for water in North Texas. The NTMWD described to the Service its plan to build a pipeline and treatment facility to remove zebra mussels from the transferred waters, but because this would take 20 months to complete, the NTMWD requested that the Service agree to an immediate flow of water into Lake Lavon to meet this urgent need. The NTMWD requested the involvement of the U.S. Attorney to help address the applicable Lacey Act prohibitions, and a meeting was arranged for the relevant parties, which included the USACE, which has the permit decision-making authority regarding activities that occur in waters of the U.S. under Section 10 of the Rivers and Harbors Act and regarding the discharge of dredged or fill material into waters of the U.S. under Section 404 of the Clean Water Act.

The Department of the Interior's Office of the Solicitor and the Service's Ecological Services office in our Southwestern Region have worked extensively with the NTMWD and the USACE on identifying workable solutions that can effectively meet the need for water supplies in North Texas and to avoid the spread of zebra mussels in Texas, since the Service was first contacted by the NTMWD in late 2010. Over this period, several design and water management options were explored and discussed among the relevant federal agencies and with the NTMWD. Most currently, we understand the U.S. Attorney is engaged in a negotiation with NTMWD on a non-prosecution agreement which would allow the transfer of water and accommodate necessary measures to protect waters not currently infested with zebra mussels. Since the involvement of the U.S. Attorney, the Service has acted in the role of technical advisor to the U.S. Attorney and the USACE. The Service is not a party to these negotiations.

Although there are zebra mussels in a few locations near Lake Texoma, the transfer of water to Lake Lavon threatens to facilitate the spread of zebra mussels throughout a wide geographic region of rivers and pipes that connect to lakes in other parts of the state.

Policy Considerations

The policy issues involved in the transfer of water by the NTWMD from Lake Texoma to Lake Lavon are significant, and the Administration understands the gravity of the challenges facing water users and the utility in this region. The threat of zebra mussels to hydrologic systems receiving water from Lake Texoma is also grave and has costly implications for industries and boating interests depending on these waters, as well as to the public through the control efforts carried out by federal and state agencies responsible for protecting native fish and wildlife populations impacted by zebra mussels. The Service, as the federal agency primarily responsible for the nation's fish and wildlife resources, has grave concerns about the impacts of zebra mussels on the aquatic ecosystems associated with Lake Lavon and the rivers, streams, and lakes receiving its waters. Zebra mussels can and have completely altered the food chain in aquatic systems, eliminating food sources and,

subsequently, sport fish species from these systems. Zebra and quagga mussels can infest water supply and power generation facilities, as well as boats and boating infrastructure. The extensive costs associated with managing their damaging impacts are often passed along to tax payers and rate payers.

Legislative exemptions for specific interests affected by the Lacey Act are unprecedented and must be considered carefully, weighing the costs and benefits to U.S. citizens and water rate payers in the short and long term. While the facts and policy issues surrounding this complicated water supply and management situation are compelling, the Administration believes a non-legislative solution is possible and that the precedent set by a legislative exemption to the Lacey Act would be very costly to America's fish and wildlife resources, as well as to its many economic and human health and safety priorities that are or may be impacted by the establishment of zebra mussels, the establishment of any injurious species in the wild, or by illegal trade in protected species.

Finally, it should be noted that H.R. 6007 exempts the transfer of water proposed by North Texas Municipal Water District from Title 16 provisions of the Lacey Act, but it would not prevent criminal charges that may be imposed under Title 18 of the Lacey Act if the water transported into Texas contained zebra mussels.

Conclusion

As always, the Service greatly appreciates the opportunity to work with the Committee on the critically important and growing challenge of managing invasive species that threaten national economic, human health, and environmental priorities.